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XV. "Contributions to the History of the Phosphorus Bases."

Parts I., II. and III. By A. W. HOFMANN, LL.D., F.R.S.
&c. Received June 21, 1860.

This paper contains the first three sections of the full and systematic exposition of the author's Researches on the Phosphorus Bases, of which brief notices have from time to time been communicated by him to the Society, and printed in the 'Proceedings.' The present communication comprehends

- I. Deportment of Triethylphosphine with Sulphur compounds. Nitro-phosphuretted Ureas.
- II. Theory of Diatomic Bases. Diphosphonium Series.
- III. Theory of Diatomic Bases. Phosphammonium—and Phospharsonium Series.

COMMUNICATIONS RECEIVED SINCE THE END OF THE SESSION.

- I. "On Boric Ethide." By EDWARD FRANKLAND, Ph.D., F.R.S., and B. DUPPA, Esq. Communicated by Dr. FRANKLAND. Received July 7, 1860.

When zincethyl in excess is brought into contact with tribasic boracic ether, $\left(B \begin{Bmatrix} C_4 H_5 O_2 \\ C_4 H_5 O_2 \\ C_4 H_5 O_2 \end{Bmatrix} \right)$, the temperature of the mixture gradually rises for about half an hour. If it be now submitted to distillation, it begins to boil at $94^\circ C.$, and between this temperature and 140° a considerable quantity of a colourless liquid distils over. The distillation then suddenly stops, the thermometer rises rapidly, and, to avoid secondary products of decomposition, the operation should now be interrupted. The materials remaining in the retort solidify, on cooling, into a mass of large crystals, which are a compound of ethylate of zinc with zincethyl. On rectification, the distillate began to boil at 70° , but the thermometer rapidly rose to 95° , at which temperature the last two-thirds of the liquid passed over and were received apart. The product thus collected exhibited a con-